

Amendments to the Claims

The following listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

Claim 1 (currently amended) A catheter comprising:

an elongated body adapted for insertion within a blood vessel, the elongated body extending from a proximal end to a distal end, the body having a first wall and a second wall that define at least one lumen, the first wall including at least one outwardly extending ridge dimensioned and positioned to engage interior wall portions of the blood vessel in supporting relation therewith to substantially minimize collapse of the vessel wall and substantially prevent occlusion of at least one lumen,

wherein the at least one outwardly extending ridge defines a lateral opening in the first wall ~~that~~ and substantially extends to the distal end of the body.

Claim 2 (Original) A catheter as recited in claim 1, wherein the first wall and the second wall define a first lumen and a second lumen that extend along the body.

Claim 3 (Original) A catheter as recited in claim 2, wherein the first lumen includes an inlet port disposed adjacent the lateral opening and the second lumen includes an outlet port disposed adjacent the distal end of the body.

Claim 4 (Original) A catheter as recited in claim 1, wherein the first wall and the second wall define a first lumen, a second lumen and a third lumen such that the second wall includes a first inner catheter wall that is disposed between the first lumen and the second lumen, a second inner catheter wall that is disposed between the second lumen and the third lumen, and a third inner catheter wall that is disposed between the third lumen and the first lumen.

Claim 5 (Original) A catheter as recited in claim 1, wherein the at least one ridge includes a pair of ridges extending from the first wall to define the lateral opening.

Claim 6 (Original) A catheter as recited in claim 5, wherein the pair of ridges define an angle with the second wall of less than 90.

Claim 7 (Original) A catheter as recited in claim 5, wherein the pair of ridges are configured and spaced apart to support a body vessel such that occlusion of the at least one lumen is substantially prevented.

Claim 8 (Original) A catheter as recited in claim 5, wherein the at least one lumen includes an inlet port that cooperates with the pair of ridges such that at least a portion of the lateral opening has a helical configuration.

Claim 9 (Original) A catheter as recited in claim 1, wherein the at least one ridge includes a plurality of lateral channels.

Claim 10 (Original) A catheter as recited in claim 1, wherein the first wall defines a plurality of side openings.

Claim 11 (Original) A catheter as recited in claim 1, wherein the lateral opening is further defined by a port defined by the at least one lumen, the port having a first end and a second end, the port extending across the first wall such that the distance between the first end of the port and the distal end of the body is less than the distance between the second end of the port and the distal end of the body.

Claim 12 (Original) A catheter as recited in claim 1, wherein the lateral opening is further defined by a port defined by the at least one lumen, the port having a first end and a second end, the port extending across the first wall such that the distance between the first end of the port and the distal end of the body is substantially equal to the distance between the second end of the port and the distal end of the body.

Claim 13 (Currently Amended) A catheter comprising:
an elongated body extending from a proximal end to a distal end, the body having an outer wall and an inner wall that define a first lumen having a first port, and a second lumen having a second port, that extend along the body, the outer wall including a

plurality of ridges outwardly extending from the outer wall and being disposed adjacent to the first port of the first lumen,

wherein the plurality of ridges define a lateral opening in the outer wall ~~and that~~ extends to the distal end of the elongated body, the plurality of ridges being ~~configured and spaced apart to support a body vessel such that occlusion of the first lumen and the second lumen is prevented~~ dimensioned and positioned to engage interior wall portions of the blood vessel in supporting relation therewith to substantially minimize collapse of the vessel wall and substantially prevent occlusion of the first lumen.

Claim 14 (Original) A catheter as recited in claim 13, wherein the lateral opening is further defined by the first port of the first lumen, the first port having a first end and a second end, the first port extending across the outer wall such that the distance between the first end of the first port and the distal end of the body is less than the distance between the second end of the first port and the distal end of the body.

Claim 15 (Original) A catheter as recited in claim 13, wherein said lateral opening is further defined by the first port of the first lumen, the first port having a first end and a second end, the first port extending across the outer wall such that the distance between the first end of the first port and the distal end of the body is substantially equal to the distance between the second end of the first port and the distal end of the body.

Claim 16 (Original) A catheter as recited in claim 13, wherein each of the plurality of ridges forms an angle with the inner catheter wall of less than 90.

Claim 17 (Original) A catheter as recited in claim 13, wherein the first port of the first lumen includes an inlet port that cooperates with the pair of ridges such that at least a portion of the lateral opening has a helical configuration.

Claim 18 (Original) A catheter as recited in claim 13, wherein each of the plurality of ridges includes a plurality of lateral channels.

Claim 19 (Original) A catheter as recited in claim 13, wherein the outer wall and the inner wall further define a third lumen, the first lumen being separated from the second lumen by a first inner catheter wall, the second lumen being separated from the third lumen by a second inner catheter wall and the third lumen being separated from the first lumen by a third inner catheter wall.

Claim 20 (Currently Amended): A catheter comprising:
an elongated body extending from a proximal end to a distal end, the elongated body having an outer wall and an inner wall that define a first lumen having a first port, a second lumen having a second port and a third lumen having a third port such that the inner wall includes a first inner catheter wall that is disposed between the first lumen and the second lumen, a second inner catheter wall that is disposed between the

second lumen and the third lumen, and a third inner catheter wall that is disposed between the third lumen and the first lumen,

the second wall including a pair of at least one outwardly extending ridges being disposed adjacent to the first port of the first lumen, the pair of ridges cooperating with the first port of the first lumen to define a lateral opening ~~that extends~~ and substantially extending to the distal end of the body, the lateral opening communicating ~~within~~ with the first lumen,

wherein the pair of ridges are configured and spaced apart to support a body vessel such that occlusion of the first lumen, the second lumen and the third lumen is substantially prevented, and being dimensioned and positioned to engage interior wall portions of the blood vessel in supporting relation therewith to substantially minimize collapse of the vessel wall.

Claim 21 (new) A catheter, which comprises:

an elongated body having proximal and distal ends and defining a longitudinal axis, the elongated body including an outer wall and having a septum extending longitudinally within the outer wall and defining at least one lumen through the elongated body, the outer wall having a lateral opening in communication with the at least one lumen, the outer wall defining a pair of ridges adjacent the lateral opening and extending beyond the septum, the ridges defining support surfaces spaced from the septum and dimensioned to engage interior wall portions of the blood vessel in supporting relative therewith to substantially minimize collapse of the vessel wall and prevent occlusive of the blood vessel.

Claim 22 (New) A catheter as recited in claim 21 wherein the ridges extend to the distal end of the elongated body.

Claim 23 (New) A catheter as recited in claim 22 wherein the septum is substantially planar.

Claim 24 (New) A catheter as recited in claim 23 wherein the ridges each define a distance between the support surfaces and the septum, the distance being substantially constant along respective longitudinal lengths of the ridges.

Claim 25 (New) A catheter as recited in claim 24 wherein the ridges are a continuation of the outer wall.

Claim 26 (New) A catheter as recited in claim 24 wherein the support surfaces are arranged at an oblique angle with respect to the longitudinal axis.